Chapter 16.08

BUILDING CODE

Sections:

Section 16.08.010 Reference to Building Code.

This chapter shall be known as the "Building Code" and may be cited as such. Whenever in this code or any ordinance of the City the phrases "Uniform Building Code" or "California Building Code" appear, such phrases shall be deemed and construed to refer to or apply to this chapter in conjunction with Chapter 16.04." (Ord. 6971 § 2, 2007; Ord. 4146 § 2 (part), 1974)

Section 16.08.020 California Building Code adopted--Filed with City Clerk.

The California Building Code, 2007 Edition, consisting of two volumes, including appendices and any related errata, and any amendments thereto by the State of California in the 2007 Edition of Title 24 of the California Code of Regulations, promulgated by the International Code Council, which regulates the erection, construction, enlargement, alteration, repair, moving, removal, conversion, demolition, occupancy, equipment, use, height, area and maintenance of buildings and other structures, is adopted and by this reference is made a part of this code with the force and effect as though set out herein in full, with the exception of those parts expressly excepted and deleted or as amended by this chapter. One copy of the California Building Code with the amendments thereto by the State of California, which has been certified as a true copy, is on file and open to public inspection in the office of the City Clerk. (Ord. 6971 § 3, 2007; Ord. 6634 § 2, 2002; Ord. 6472 § 3, 1999; Ord. 6253 § 2, 1995; Ord. 5996 § 3, 1992; Ord. 5830 § 1, 1990; Ord. 5552 § 7, 1987; Ord. 5259 § 17, 1985; Ord. 4853 § 46, 1980; Ord. 4604 § 2 (part), 1978; Ord. 4192 § 2 (part), 1975; Ord. 4146 § 2 (part), 1974))

Section 16.08.030 Sections deleted and not adopted.

The chapters, sections, paragraphs and parts of the California Building Code which are excepted, deleted and not adopted are:

1. Appendix Chapter 1, Sections 105.3, 105.5, 108, 110.2, 112;
2. Appendix A;
3. Appendix B;
4. Appendix D, E, and F; and
5. Appendix H. (Ord. 6971 § 4, 2007; Ord. 6634 § 3, 2002; Ord. 6472 § 4, 1999;

Ord. 6253 § 3, 1995: Ord. 6180 § 1, 1994: Ord. 6121 § 2, 1994; Ord. 6083 § 1, 1993; Ord. 5996 § 4, 1992; Ord. 5830 § 2, 1990; Ord. 5552 § 8, 1987; Ord. 5259 § 18, 1985; Ord. 4853 § 47, 1980; Ord. 4604 § 2 (part), 1978; Ord. 4146 § 2 (part), 1974)

Section 16.08.040 Appendix Chapter 1, Section 105.1 amended--Permits.

Appendix Chapter 1, Section 105 of the California Building Code is hereby amended by amending section 105.1 entitled Required by adding to the end of such section the following exceptions:

Exceptions: Exceptions to issuance of a permit are:

1. A permit shall not be issued for work on property within an area which may be unsafe for such work and, because of the hazards, there is no way in which the work can be done so that it will be safe;

2. A permit may be withheld or denied if the Building Official finds there are existing on site violations of the provisions of Chapter 16.04 through 16.20 or of any other ordinance of the City, including any and all provisions of this code and including without limitation the provisions of the zoning regulations. (Ord. 6971 § 5, 2007; Ord. 6260 § 1, 1996)

Section 16.08.135 Section 903 amended--Automatic sprinkler systems.

Section 903.2 of the California Building Code is hereby amended in its entirety to read as follows:

Section 903.2(a) **Where Required.** An automatic fire extinguishing system shall be installed and maintained in operable condition in the buildings and locations as set forth in this section.

For special provisions on hazardous chemicals, magnesium and calcium carbide, see the Fire Code.

(b) **All New Buildings.** An automatic sprinkler system shall be installed and maintained in operable condition in all new buildings. All systems shall conform to the National Fire Protection Association Standards 13, 13D and 13R and the Riverside Fire Department Standards and Policies.

EXCEPTIONS:

1. Buildings less than 1,000 square feet in floor area, other than Group R-1, Group R-2, and Group R-3 occupancies, unless specifically required by other provisions of the California Building Code.

2. Private garages and carports unless specifically required by N.F.P.A. 13D or 13R.

3. Building accessory to Group R3 occupancies other than additional R1, R-2*,* or R3 occupancies.

4. Group F and S occupancies, less than 5,000 square feet in floor area, that are accessory to uses such as golf courses, tree nurseries, parks, farms, etc. Administrative and clerical office use areas may not exceed 25 percent of the floor area of the major use. Additionally, the site must be zoned RE, HR, RA, RA-2, RA-5 or RC.

5. Structures that have no occupant load as determined by the Building Official.

6. Swimming pools, spas gazebos, shade structures or other open-air structures that meet California Building Code requirements for separation.

7. Structures which do not require building permits.

8. Mausoleums, crypts, and similar structures.

9. Agricultural buildings as defined in the California Building Code, Appendix C.

10. Structures and buildings designed exclusively to shelter or protect equipment such as pump houses, substations, and similar structures.

11. Mobile homes and manufactured homes.

12. Temporary modular construction offices.

13. Group R occupancies for which a fire station development fee as set forth in Chapter 16.52 has been paid prior to March 1, 1993 or Group R occupancies situated within a community facilities district or an assessment district formed prior to March 1, 1993 when said district has agreed to pay for a proportionate share for construction of a fire station to serve the area of the district.

(c) **Existing Buildings.** Buildings in existence prior to March 1, 1993 or buildings for Group R, Division 3 and Group U occupancies for which plans were submitted and plan check fees paid to the City prior to March 1, 1993 shall be exempt from the requirements of this section.

EXCEPTIONS:

1. Automatic fire sprinkler systems shall be installed and maintained in the entire building whenever additions are constructed that increase the floor area by more than 5000 square feet or the increase in floor area is greater than 50% of the existing floor area, whichever is greater.

(d) **Conflict**. Where in any case, there are conflicting provisions between the California Building Code as adopted by the City and this section, the more restrictive shall govern.

(e) **Standards**. All automatic fire sprinkler systems required by this section shall comply with N.F.P.A. 13, 13D and 13R. (Ord. 6971 § 6, 2007; Ord. 6634 § 5, 2002; Ord. 6472 § 6, 1999; Ord. 6260 § 2, 1996: Ord. 6253 § 8, 1995: Ord. 6019 § 1, 1992; Ord. 5996 § 10, 1992; Ord. 5964 § 1, 1991; Ord. 5830 § 8, 1990; Ord. 5259 § 24, 1985)

Section 16.08.140 Section 1510.1 amended Reroofing inspections.

Section 1510.1.1 **Reroofing Inspections.** New roof coverings shall not be applied without first obtaining approval from the Building Official. A final inspection and approval shall be obtained from the Building Official when the reroofing is complete. The reroofing installer shall investigate the existing roofing to ascertain that the new roofing will not violate either the roofing manufacturer's installation instructions nor the provisions of this chapter. Where excessive ponding of water is apparent, an analysis of the roof structure shall be made and corrective measures, such as relocation of roof drains or scuppers, resloping of the roof or structural changes, shall be made. (Ord. 6971 § 7, 2007; Ord. 6634 § 11, 2002; 6253 § 9, 1996)

Section 16.08.175 Exterior noise insulation standards.

A. The purpose of this section is to establish uniform minimum noise insulation performance standards to protect persons within new hotels, motels, apartment houses, and all other dwellings including detached single-family dwellings from the effects of excessive exterior noise, including but not limited to hearing loss or impairment and persistent interference with speech and sleep.

B. The following provisions of this section apply to new hotels, motels, apartment houses and all other dwellings including detached single-family dwellings:

1. Location and Orientation. Consistent with land use standards, residential structures located in noise critical areas, such as proximity to the select system of County roads and City

streets (as specified in Section 186.4 of the State Streets and Highways Code), railroads, rapid transit lines, airports or industrial areas shall be designed to prevent the intrusion of exterior noises beyond prescribed levels with all exterior doors and windows in the closed position. Proper design shall include, but shall not be limited to orientation of the residential structure, setbacks, shielding and sound insulation of the building itself.

2. Interior Levels. Interior day-night average sound levels (Ldn) with windows closed, attributable to exterior sources shall not exceed an Ldn of forty-five decibels (dBA) in any habitable room.

3. Airport Noise Source. Residential structures to be located within an Ldn contour of sixty dBA or higher require an acoustical analysis showing that the structure has been designed to limit intruding noise to the allowable interior noise levels prescribed in this subsection. The Ldn contour shall be determined in accordance with Ldn noise levels anticipated by the Riverside general plan or by more current Ldn contour maps developed for governmental agencies and deemed acceptable by the Planning Director.

4. Vehicular and Industrial Noise Sources. Residential buildings or structures to be located within Ldn contours of sixty dBA or higher from the select system of County roads and City streets (as specified in Section 186.4 of the State Streets and Highways Code), freeways, State highways, railroads, rapid transit lines and industrial noise sources shall require an acoustical analysis showing that the proposed building has been designed to limit intruding noise to the allowable interior noise levels prescribed in this subsection. The Ldn contour shall be determined in accordance with Ldn noise levels anticipated by the Riverside general plan or by more current Ldn contour maps developed for governmental agencies and deemed acceptable by the Planning Director. Exception: Railroads, where there are no nighttime (ten p.m. to seven a.m.) railway operations and where daytime (seven a.m. to ten p.m.) railway operations do not exceed four per day.

5. Compliance. Evidence of compliance shall consist of submittal of an acoustical analysis report, prepared under the supervision of a person experienced in the field of acoustical engineering, with the application for building permit. The report shall show topographical relationship of noise sources and dwelling site, identification of noise sources and their characteristics, predicted noise spectra at the exterior of the proposed dwelling structure considering present and future land usage, basis for the prediction (measured or obtained from published data), noise attenuation measures to be applied, and an analysis of the noise insulation effectiveness of the proposed construction showing that the prescribed interior noise level requirements are met. If interior allowable noise levels are met by requiring that windows be unopenable or closed, the design for the structure must also specify the means that will be employed to provide ventilation, and cooling if necessary, to provide a habitable interior environment.

6. Field Testing. When inspection indicates that the construction is not in accordance with the approved design, field testing may be required. Interior noise measurements shall be taken under conditions of typical maximum exterior noise levels within legal limits. A test report showing compliance or noncompliance with prescribed interior allowable levels shall be submitted to the Building Official.

Where a complaint as to noncompliance with this section requires a field test to resolve the complaint, the complainant shall post a bond or adequate funds in escrow for the cost of said testing. Such costs shall be chargeable to the complainant when such field tests show that compliance with these regulations is in fact present. If such tests show noncompliance, then such testing costs shall be borne by the owner or builder.

C. Exception. Based upon a determination that the exterior noise standards established in this section would not be exceeded within certain specified areas of the City, the provisions of subsection B of this section requiring the submittal of an acoustical analysis report for the application of a detached single-family dwelling shall not be required for the following area

within the City subject to compliance with State law: the Casa Blanca redevelopment project area encompassing the area generally bounded by the Riverside Freeway on the north, Victoria Avenue on the south, Mary Street and Washington Street on the east, and a line six hundred feet west of Jefferson Street on the west. (Ord. 6472 § 7, 1999; Ord. 4716 § 1, 1979; Ord. 4512 § 1, 1978; Ord. 4318 § 1, 1976; Ord. 4168 § 1, 1974)

Section 16.08.185 Geologic investigation required.

As a prerequisite to the issuance of building permits for any property identified by the seismic safety element of the Riverside general plan as being potentially subject to liquefaction during a groundshaking episode, a thorough geologic analysis by an expert in the field shall be made identifying the specific potential of the subject property for liquefaction and prescribing specific construction measures to eliminate or substantially reduce the possibility of structural failure from this cause. Said analysis shall be subject to approval by the Building Official and prescribed mitigating measures shall be incorporated into building plans submitted for permits. A geologic analysis shall not be required for the construction of a single-family dwelling or a duplex of one-story, wood-frame construction, nor any building addition of less than six hundred fifty square feet, nor any sign installation, nor any freestanding wall. (Ord. 4930 § 1, 1981)

Section 16.08.195 Repair and Reconstruction of Damaged Structures.

This chapter establishes regulations as amendments to the building code for the expeditious repair of damaged structures. In the event an amendment to the California Building Standards Code results in differences between these building standards and the California Building Standards Code, the text of these building standards shall govern. In accordance with California Health and Safety Code Section 17958.7, express findings that modifications to the California Building Standards Code are reasonably necessary because of local climatic, geological or topographical conditions are either already on file with the California Building Standards Commission, or will be filed prior to the effective date of the ordinance codified in this Article. In accordance with California Government Code Section 50022.6, at least one true copy of the California Building Code has been on file with the City Clerk since fifteen (15) days prior to enactment of the ordinance codified in this Article. While this Article is in force, a true copy of this Chapter shall be kept for public inspection in the office of the City Clerk. A reasonable supply of this Chapter shall be available in the office of the City Clerk for public purchase.

A. Definitions

For the purposes of this chapter, the following definition applies and is hereby added to Section 3402.1 Definitions of the 2007 California Building Code (CBC):

1. Substantial Structural Damage. A condition where:

a. In any story, the vertical elements of the lateral-force-resisting system, have suffered damage such that the lateral load-carrying capacity of the structure in any direction has been reduced by more than 20 percent from its pre-damaged condition, or

b. The capacity of any vertical gravity load-carrying component, or any group of such components, that supports more than 30 percent of the total area of the structure's floor(s) and roof(s) has been reduced more than 20 percent from its pre-damaged condition, and the remaining capacity of such affected elements with respect to all dead and live loads is less than 75 percent of that required by the building code for new buildings of similar structure, purpose, and location.

B. Repairs

For the purposes of this chapter, the following repair requirements are hereby added as a new Subsection 3403.5 to Section 3403 Additions, Alterations or Repair in the 2007 California Building Code (CBC):

3403.5.1 Repairs. Repairs of structural elements shall comply with this section.

3403.5.1.1 **Seismic evaluation and design**. Seismic evaluation and design of an existing building and its components shall be based on the following criteria.

3403.5.1.1.1 **Evaluation and design procedures**. The seismic evaluation and design shall be based on the procedures specified in the building code, ASCE 31 Seismic Evaluation of Existing Buildings (for evaluation only) or ASCE 41 Seismic Rehabilitation of Existing Buildings. The procedures contained in Appendix A of the International Existing Building Code shall be permitted to be used as specified in Section 3403.5.1.1.3.

3403.5.1.1.2 **CBC level seismic forces**. When seismic forces are required to meet the building code level, they shall be one of the following:

1. **100 percent of the values in the building code**. The R factor used for analysis in accordance with Chapter 16 of the building code shall be the R factor specified for structural systems classified as "Ordinary" unless it can be demonstrated that the structural system satisfies the proportioning and detailing requirements for systems classified as "Intermediate" or "Special".

2. **Forces corresponding to BSE-1 and BSE-2 Earthquake Hazard Levels defined in ASCE 41**. Where ASCE 41 is used, the corresponding performance levels shall be those shown in Table 3403.5.1.1.2.

TABLE 3403.5.1.1.2
ASCE 41 and ASCE 31 PERFORMANCE LEVELS

OCCUPANCY CATEGORY (BASED ON IBC TABLE 1604.5)	PERFORMANCE LEVEL FOR USE WITH ASCE 31 AND WITH ASCE 41 BSE-1 EARTHQUAKE HAZARD LEVEL	PERFORMANCE LEVEL FOR USE WITH ASCE 41 BSE-2 EARTHQUAKE HAZARD LEVEL
I	Life Safety (LS)	Collapse Prevention (CP)
II	Life Safety (LS)	Collapse Prevention (CP)
III	Note (a)	Note (a)
IV	Immediate Occupancy (IO)	Life Safety (LS)

Note (a.) Performance Levels for Occupancy Category III shall be taken as halfway between the performance levels specified for Occupancy Category II and Occupancy Category IV.

3403.5.1.1.3 **Reduced CBC level seismic forces**. When seismic forces are permitted to meet reduced building code levels, they shall be one of the following:

1. **75 percent of the forces prescribed in the building code**. The R factor used for analysis in accordance with Chapter 16 of the building code shall be the R factor as specified in Section 3403.5.1.1.2.

2. In accordance with the applicable chapters in Appendix A of the International Existing Building Code as specified in Items 2.1 through 2.5 below. Structures or portions of structures that comply with the requirements of the applicable chapter in Appendix A shall be deemed to comply with the requirements for reduced building code force levels.

2.1. The seismic evaluation and design of unreinforced masonry bearing wall buildings

in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A1.

2.2. Seismic evaluation and design of the wall anchorage system in reinforced concrete and reinforced masonry wall buildings with flexible diaphragms in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A2.

2.3. Seismic evaluation and design of cripple walls and sill plate anchorage in residential buildings of light-frame wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A3.

2.4. Seismic evaluation and design of soft, weak, or open-front wall conditions in multiunit residential buildings of wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A4.

2.5. Seismic evaluation and design of concrete buildings and concrete with masonry infill buildings in all Occupancy Categories are permitted to be based on the procedures specified in Appendix Chapter A5.

3. In accordance with ASCE 31 based on the applicable performance level as shown in Table 3403.5.1.1.2.

4. Those associated with the BSE-1 Earthquake Hazard Level defined in ASCE 41 and the performance level as shown in Table 3403.5.1.1.2. Where ASCE 41 is used, the design spectral response acceleration parameters Sxs and Sx1 shall not be taken less than 75 percent of the respective design spectral response acceleration parameters SDS and SD1 defined by the International Building Code and its reference standards.

3403.5.1.2 **Wind Design**. Wind design of existing buildings shall be based on the procedures specified in the building code.

3403.5.2 **Repairs to damaged buildings**. Repairs to damaged buildings shall comply with this section.

3403.5.2.1 **Unsafe conditions**. Regardless of the extent of structural damage, unsafe conditions shall be eliminated.

3403.5.2.2 **Substantial structural damage to vertical elements of the lateral–force-resisting system**. A building that has sustained substantial structural damage to the vertical elements of its lateral-force-resisting system shall be evaluated and repaired in accordance with the applicable provisions of Section 3403.5.2.2.1 through 3403.5.2.2.3.

3403.5.2.2.1 **Evaluation**. The building shall be evaluated by a registered design professional, and the evaluation findings shall be submitted to the Building Official. The evaluation shall establish whether the damaged building, if repaired to its pre-damage state, would comply with the provisions of the building code. Wind forces for this evaluation shall be those prescribed in the building code. Seismic forces for this evaluation are permitted to be the reduced level seismic forces specified in Code Section 3403.5.1.1.3.

3403.5.2.2.2 **Extent of repair for compliant buildings**. If the evaluation establishes compliance of the pre-damage building in accordance with Section 3403.5.2.2.1, then repairs shall be permitted that restore the building to its pre-damage state, using materials and strengths that existed prior to the damage.

3403.5.2.2.3 **Extent of repair for non-compliant buildings**. If the evaluation does not establish compliance of the pre-damage building in accordance with Section 3403.5.2.2.1, then the building shall be rehabilitated to comply with applicable provisions of the building code for load combinations including wind or seismic forces. The wind design level for the repair shall be as required by the building code in effect at the time of original construction unless the damage

was caused by wind, in which case the design level shall be as required by the code in effect at the time of original construction or as required by the building code, whichever is greater. Seismic forces for this rehabilitation design shall be those required for the design of the predamaged building, but not less than the reduced level seismic forces specified in Section 3403.5.1.1.3. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of the building code for new buildings of similar structure, purpose, and location.

3403.5.2.3 **Substantial structural damage to vertical load-carrying components**. Vertical load-carrying components that have sustained substantial structural damage shall be rehabilitated to comply with the applicable provisions for dead and live loads in the building code. Undamaged vertical load-carrying components that receive dead or live loads from rehabilitated components shall also be rehabilitated to carry the design loads of the rehabilitation design. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of the building code for new buildings of similar structure, purpose, and location.

3403.5.2.3.1 **Lateral force-resisting elements**. Regardless of the level of damage to vertical elements of the lateral force-resisting system, if substantial structural damage to vertical load-carrying components was caused primarily by wind or seismic effects, then the building shall be evaluated in accordance with Section 3403.5.2.2.1 and, if non-compliant, rehabilitated in accordance with Section 3403.5.2.2.3.

3403.5.2.4 **Less than substantial structural damage**. For damage less than substantial structural damage, repairs shall be allowed that restore the building to its pre-damage state, using materials and strengths that existed prior to the damage. New structural members and connections used for this repair shall comply with the detailing provisions of the building code for new buildings of similar structure, purpose, and location.

3403.5.3 Referenced Standards

Standard Referenced Number	Title	Reference In Code Section Number
ASCE 31-03	Seismic Evaluation of Existing Buildings	3403.5.1.1.1, TABLE 3403.5.1.1.2, 3403.5.1.1.3
ASCE 41-06	Seismic Rehabilitation of Existing Buildings	3403.5.1.1.1, 3403.5.1.1.2, TABLE 3403.5.1.1.2, 3403.5.1.1.3

(Ord. 6971 § 8, 2007)

Section 16.08.205 Safety Assessment Placards.

This chapter establishes standard placards to be used to indicate the condition of a structure for continued occupancy. The chapter further authorizes the Building Official and his or her authorized representatives to post the appropriate placard at each entry point to a building or structure upon completion of a safety assessment.

A. Application of Provisions.

1. The provisions of this chapter are applicable to all buildings and structures of all occupancies regulated by the City of Riverside. The City Council may extend the provisions as necessary.

B. Definitions.

1. Safety assessment is a visual, non-destructive examination of a building or structure for the purpose of determining the condition for continued occupancy.

C. Placards.

1. The following are verbal descriptions of the official jurisdiction placards to be used to designate the condition for continued occupancy of buildings or structures.

(a) INSPECTED - Lawful Occupancy Permitted is to be posted on any building or structure wherein no apparent structural hazard has been found. This placard is not intended to mean that there is no damage to the building or structure.

(b) RESTRICTED USE is to be posted on each building or structure that has been damaged wherein the damage has resulted in some form of restriction to the continued occupancy. The individual who posts this placard will note in general terms the type of damage encountered and will clearly and concisely note the restrictions on continued occupancy.

(c) UNSAFE - Do Not Enter or Occupy is to be posted on each building or structure that has been damaged such that continued occupancy poses a threat to life safety. Buildings or structures posted with this placard shall not be entered under any circumstance except as authorized in writing by the Building Official, or his or her authorized representative. Safety assessment teams shall be authorized to enter these buildings at any time. This placard is not to be used or considered as a demolition order. The individual who posts this placard will note in general terms the type of damage encountered.

2. The name of the jurisdiction shall be permanently affixed to each placard.

3. Once it has been attached to a building or structure, a placard is not to be removed, altered or covered until done so by an authorized representative of the Building Official. It shall be unlawful for any person, firm or corporation to alter, remove, cover or deface a placard unless authorized pursuant to this section. (Ord. 6971 § 9, 2007)